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Fliesler Meyer LLP 650 California Street 14th Floor San Francisco, CA 94108			KIM, PAUL	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/618,495	Applicant(s) OWEN ET AL.	
	Examiner PAUL KIM	Art Unit 2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,49,53,54,56-60,62 and 67-99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,49,53,54,56-60,62 and 67-99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/17/08, 10/07/08</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Office action is responsive to the following communication: Amendment filed on 3 July 2008.
2. Claims 1-6, 49, 53-54, 56-60, 62, and 67-99 are pending and present for examination.

Response to Amendment

3. Claims 1, 6, 53, 60, 67, 72, 75, 80, 84, 90, 92, and 98 have been amended.
4. No claims have been cancelled.
5. No claims have been added.

Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on 17 July 2008 and 7 October 2008 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. **Claims 75-82 and 92-99** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed toward "[a] computer readable medium for managing a virtual content repository" and are non-statutory because they encompass subject matter and/or embodiments which do not fall within a statutory category.

The present Specification discloses that "[s]tored on any one of the computer readable medium (media), the present invention includes software." See Specification, [0053]. Furthermore, while the

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computer readable medium has not been specifically defined, paragraph [0052] of the Specification discloses that storage medium can include optical cards and other types of media.

Wherein paragraph [0026] of the Specification further discloses that electrical, magnetic, , or optical signals capable of being transferred through electrical or optical components, the computer readable medium of the present invention would contain non-statutory subject matter as said computer readable medium would improperly include network transmission lines (interpreted as wired and wireless transmission), wireless transmission media, signals propagating through space, radio waves, infrared signals, etc. For the aforementioned reasons discussed in the objections to the Specification, paragraphs [0026] and [0053], which are incorporated herein, the claimed invention does not properly cover only statutory subject matter (e.g., program code being transmitted over wired or wireless transmission media) because in such a case there is no tangible embodiment of program code in a computer readable medium executed by a processor, and further because the disclose program code being transmitted across the transmission media cannot be executed by any known processor. Therefore, the transmitted program code lacks functional capability because, absent execution, it cannot cause any of the claimed operations to be performed, and so, in the state of being transmitted, the program code represents nothing more than non-functional descriptive material. Moreover, under 35 U.S.C. § 101, signals propagating through space, radio waves, and infrared signals are not permissible "articles of manufacture" because they have no tangible embodiment.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. **Claims 1, 3-4, 49, 53-54, 57-58, 62, 67, 69-70, 75, 77-78, 84-85, 87-88, 92-93, and 95-96** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hotti et al (U.S. Patent No. 6,970,876, hereinafter referred to as HOTTI), filed on 8 May 2001, and issued on 29 November 2005, in view of Golshani et al (U.S. Patent No. 5,806,066, hereinafter referred to as GOLSHANI), filed on 26 March 1996, and issued on 8 September 1998.

11. **As per independent claims 1, 53, 67, 75, 84, and 92** HOTTI, in combination with GOLSHANI, discloses:

A method of managing a virtual content repository (VCR) that represents a plurality of content repositories {See. HOTTI, col. 1, lines 45-54, wherein this reads over "Database Catalogue" logically partitions a database . . . [wherein] each logical database is a catalogue and contains a complete, independent group of database objects. . . . This makes it possible, for example to create two or more replica databases into one physical database; and col. 1, lines 54-56, wherein this reads over "Database Node" is a database catalogue, which has been defined to act as a master or replica and thus participates in a hierarchy of synchronized databases."}, the method comprising:

creating a content node for each of the plurality of content repositories and associating each content node with its own content schema {See HOTTI, Figure 9, Elements 921 a, b, and c; and col. 6, lines 52-66, wherein this reads over "[a]s part of the registration, the identification data, e.g. schema name, or the new application data node is sent to the configuration management master database node"}, wherein each of the plurality of content repositories includes content that is unique {See HOTTI, col. 6, lines 30-31, wherein this reads over "[t]he configuration management replicas may be full or partial copies} from content in the other content repositories;

creating a hierarchy of hierarchy nodes in the VCR {See HOTTI, Figure 9; and col. 9, lines 19-27, wherein this reads over "a hierarchic system where several database systems a, b, c have their respective schema management nodes"}, and for each hierarchy node comprising the substeps of:

indicating a location of the hierarchy node in the hierarchy by an identifier {See HOTTI, col. 7, lines 18-41, wherein this reads over "two new, empty database nodes are created to the database server where the application replica database will reside . . . and registered with the configuration management master As part of the registration, the identification data . . . is sent; and col. 9, lines 38-42, wherein this reads over "the invention can be implemented to work in a telecommunication system, which is compliant with . . . TCP/IP"};

relating the hierarchy node to a type of content {See HOTTI, col. 2, wherein this reads over "[a] schema is a representation of the structure of the database that illustrates what kind of data is stored in the database"};

associating the hierarchy node with one or more content nodes {See HOTTI, col. 2, wherein this reads over "[a] schema is a representation of the structure of the database that illustrates what kind of data is stored in the database"}; and

associating the hierarchy node with its own hierarchy schema {See HOTTI, Figure 2a, Elements 233 and 203; col. 6, lines 20-24, wherein this reads over "replicas of the configuration management master are stored into database server 201, 211, 221 of the database system"};

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and col. 7, lines 20-26, wherein this reads over, "schema name of the new application database is sent to the configuration management master database node";

creating a content node for each of the plurality of content repositories {See HOTTI, Figure 9, elements 921 a, b, and c};

storing the hierarchy and content nodes in the VCR {See HOTTI, Figure 2b; and col. 3, lines 28-31, wherein this reads over "[t]here is also a configuration management master 233 stored in the configuration management node, and replicas 203213, 223 of the configuration management master are stored into database servers 201, 211, 221 of the database system"}, **resulting in storing each schema in one of the plurality of content repositories** {See HOTTI, col. 2, lines 32-34, wherein this reads over "the application replica databases include schemas 113, 123, which may be a full or partial copy of the schema 103 of the application master database"}; **and**

presenting the plurality of content repositories associated with the VCR as a single content repository to an application program interface {See GOLSHANI, Abstract, wherein this reads over "[t]he schemas of two of the independent database systems are fetched from the subservient computer systems" and "create a virtual database residing in the host computer system satisfying the requirements of the global integrated schema"} wherein each of the hierarchy schemas and content schemas remain associated with their respective hierarchy nodes and content nodes.

The combination of inventions disclosed in HOTTI and GOLSHANI would disclose an invention which would comprise of a method wherein a plurality of content repositories may be presented as a single content repository via a virtual content repository (VCR). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HOTTI by combining it with the invention disclosed by GOLSHANI.

One of ordinary skill in the art would have been motivated to do this modification so that the content schemas and hierarchy schemas may be obtained to create a virtual content repository.

12. **As per dependent claims 3, 57, 69, 77, 87, and 95**, the claims are treated as being optionally recited since the value "can" be a text string, a number, and etc. Therefore, since the requirement for the value being a text string, a number, an image, an audio/visual presentation, and binary data is optional and not necessary to the claimed invention, the claim is rejected.

13. **As per dependent claims 4, 58, 70, 78, 88, and 96** HOTTI, in combination with GOLSHANI, discloses:

The method claim 1 further comprising:

integrating each one of the plurality of content repositories into the VCR by use of one or more of a VCR browser, a content node editor, a schema editor, and a property editor {See HOTTI, col. 7, lines 11-16, wherein this reads over "using the configuring management application"}.

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14. **As per dependent claims 54, 85, and 93**, HOTTI, in combination with GOLSHANI, discloses:

The method of claim 53 further comprising:

associating each hierarchy node with its own hierarchy schema {See HOTTI, Figure 2a, Elements 233 and 203; col. 6, lines 20-24, wherein this reads over "replicas of the configuration management master are stored into database server 201, 211, 221 of the database system"; and col. 7, lines 20-26, wherein this reads over, "schema name of the new application database is sent to the configuration management master database node"}; and

associating each content node with its own content schema {See HOTTI, Figure 9, Elements 921 a, b, and c; and col. 6, lines 52-66, wherein this reads over "[a]s part of the registration, the identification data, e.g. schema name, or the new application data node is sent to the configuration management master database node"}.

15. **As per independent claim 62, 74, 82-83, 91, and 99**, HOTTI, in combination with GOLSHANI, discloses:

The method of claim 53 further comprising:

Searching for one of a hierarchy node and content node returning a selected node {See HOTTI, col. 7, lines 18-41, wherein this reads over "two new, empty database nodes are created to the database server where the application replica database will reside . . . and registered with the configuration management master As part of the registration, the identification data . . . is sent; and col. 9, lines 38-42, wherein this reads over "the invention can be implemented to work in a telecommunication system, which is compliant with . . . TCP/IP"}; and

performing an operation on the selected node, the operation comprising one of

deleting the selected node,
changing the location of the selected node in the VCR,
reading the schema associated with the selected node, and
updating the schema associated with the selected node {See HOTTI, col. 3, lines 21-25, wherein this reads over "These synchronized schema/application configuration management replicas comprise scripts that are used for creating and/or updating the schemas of the database nodes and managing the configurations of applications that use the database node"}.

16. **Claims 2-3, 5-6, 29-30, 56-57, 59-60, 68-69, 71-72, 75, 77, 79-80, 86-87, 89-90, 94-95, and 97-98** are rejected under 35 U.S.C. 103(a) as being unpatentable over HOTTI, in view of GOLSHANI, and in further view of Wotring et al (U.S. Patent No. 6,665,677, hereinafter referred to as WOTRING), filed on October 2, 2000, and issued on December 16, 2003.

HOTTI teaches the limitations of claims 1, 3-4, 49, 53-54, 57-58, 62, 67, 69-70, 75, 77-78, 84-85, 87-88, 92-93, and 95-96 for the reasons stated above.

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HOTTI differs from the claimed invention in that HOTTI fails to teach a method (also a computer data signal, a system, and a machine readable medium) wherein the first and second schemas comprise one or more properties, wherein each property is an association between a name and at least one value (claims 2, 56, 68, 76, 86, and 94).

HOTTI differs from the claimed invention in that HOTTI fails to teach a method (also a computer data signal, a system, and a machine readable medium) wherein the value can be a text string, a number, an image, an audio/visual presentation, or binary data (claims 3, 57, 69, 77, 87, and 95).

HOTTI differs from the claimed invention in that HOTTI fails to teach a method (also a computer data signal, a system, and a machine readable medium) wherein the schema includes at least one property definition (claims 5, 59, 71, 79, 89, and 97).

HOTTI differs from the claimed invention in that HOTTI fails to teach a method (also a computer data signal, a system, and a machine readable medium) wherein a property definition can specify, for a property, property choices (claims 6, 60, 72, 80, 90, and 98).

17. **As per dependent claims 2, 56, 68, 76, 86, and 94,** HOTTI, in combination with GOLSHANI and WOTRING, discloses a method (also a computer data signal, a system, and a machine readable medium) wherein the first and second schemas comprise one or more properties, wherein each property is an association between a name and at least one value {See WOTRING, Figure 3; and col. 4, lines 27-30, wherein this reads over "[t]he schema defines the logical categories in which data can be stored"}.

The combination of inventions disclosed in HOTTI and WOTRING would disclose an invention which would comprise of a method (also a computer data signal, a system, and a machine readable medium) wherein the schema comprise properties which are associations between a name and a value. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HOTTI by combining it with the invention disclosed by WOTRING.

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One of ordinary skill in the art would have been motivated to do this modification since a schema is a description for how data is stored in a database, thus, necessitating the association of names and values.

18. **As per dependent claims 3, 57, 69, 77, 87, and 95,** HOTTI, in combination with GOLSHANI and WOTRING, discloses a method (also a computer data signal, a system, and a machine readable medium) wherein the value can be a text string, a number, an image, an audio/visual presentation, or binary data {See WOTRING, Figure 3; and col. 4, lines 27-30, wherein this reads over "[t]he schema defines the logical categories in which data can be stored"}.

The combination of inventions disclosed in HOTTI and WOTRING would disclose an invention which would comprise of a method (also a computer data signal, a system, and a machine readable medium) wherein the value can be a text string, a number, an image, an audio/visual presentation, or binary data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HOTTI by combining it with the invention disclosed by WOTRING.

One of ordinary skill in the art would have been motivated to do this modification since a schema is a description for how data is stored in a database, thus, necessitating that the stored value be in the format of a text string, a number, an image, an audio/visual presentation, or binary data.

19. **As per dependent claims 5, 59, 71, 79, 89, and 97,** HOTTI, in combination with GOLSHANI and WOTRING, discloses a method (also a computer data signal, a system, and a machine readable medium) wherein the schema includes at least one property definition {See WOTRING, Figure 3; and col. 4, lines 27-30, wherein this reads over "[t]he schema defines the logical categories in which data can be stored"}.

The combination of inventions disclosed in HOTTI and WOTRING would disclose an invention which would comprise of a method (also a computer data signal, a system, and a machine readable medium) wherein the schema includes at least one property definition, specifically logical categories into which data may be classified. Therefore, it would have been obvious to one of ordinary skill in the art at

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the time the invention was made to modify the above invention suggested by HOTTI by combining it with the invention disclosed by WOTRING.

One of ordinary skill in the art would have been motivated to do this modification since a schema is a description for how data is stored in a database, thus, necessitating that certain properties be defined.

20. **As per dependent claims 6, 60, 72, 80, 90, and 98**, HOTTI, in combination with GOLSHANI and WOTRING, discloses a method (also a computer data signal, a system, and a machine readable medium) where a property definition can specify property choices {See WOTRING, Figure 3; and col. 4, lines 27-30, wherein this reads over "[t]he schema defines . . . the attributes that belong to the individual logical categories"}.

The combination of inventions disclosed in HOTTI and WOTRING would disclose an invention which would comprise of a method (also a computer data signal, a system, and a machine readable medium) wherein the property definition can specify certain property choices, or attributes belonging to individual logical categories. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HOTTI by combining it with the invention disclosed by WOTRING.

One of ordinary skill in the art would have been motivated to do this modification since a schema is a description for how data is stored in a database, thus, necessitating that certain property definitions be specified in further detail by property choices.

21. **Claims 49, 73, and 81** are rejected under 35 U.S.C. 103(a) as being unpatentable over HOTTI, in view of GOLSHANI, and in further view of Wotring et al (U.S. Patent No. 6,853,997, hereinafter referred to as WOTRING '997), filed on 28 June 2001, and issued on 8 February 2005

HOTTI teaches the limitations of claims 1, 3-4, 49, 53-54, 57-58, 62, 67, 69-70, 75, 77-78, 84-85, 87-88, 92-93, and 95-96 for the reasons stated above.

HOTTI differs from the claimed invention in that HOTTI fails to teach a method (also a computer data signal, a system, and a machine readable medium) wherein the identifier is a path (claims 49, 73, and 81).

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22. **As per dependent claims 49, 73, and 81**, HOTTI, in combination with GOLSHANI and WOTRING '997, discloses a method wherein the identifier is a path {See WOTRING '997, Figures 1 and 2}.

The combination of inventions disclosed in HOTTI and WOTRING '997 would disclose an invention which would comprise of a method wherein the identifier is a path indicating the location of the hierarchy node in the hierarchy (e.g. "Entity Path = \"Person\Physical Description\""). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by HOTTI by combining it with the invention disclosed by WOTRING '997.

One of ordinary skill in the art would have been motivated to do this modification so that the application may determine the location of each hierarchy node in the hierarchy.

Response to Arguments

23. Applicant's arguments filed 3 July 2008 have been fully considered but they are not persuasive.

a. Rejections under 35 U.S.C. 103

Applicant asserts the argument that Hotti in view of Golshani fails to disclose a method wherein "each of the plurality of different content repositories includes content that is unique from content in the other content repositories." See Amendment, page 15. The Examiner respectfully disagrees. It is noted that Hotti discloses a system wherein the application database nodes can maintain a full or partial copy of the application master database servers' data. See Hotti, col. 6, lines 6-10. Accordingly, wherein only a partial copy of a database is maintained on another storage unit (i.e. a different content repository), said partial copy would be unique from the content in the original database. That is, since the partial content of a database is a subset of and different in form from the full content of said database, one of ordinary skill in the art would have readily discerned that said partial content is unique from the original database content.

Secondly, Applicant asserts the argument that Golshani fails to disclose a method wherein "the hierarchy and content schemas remain associated with their respective hierarchy

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and content nodes." See Amendment, page 16. The Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). For purposes of clarification, it is noted that the Golshani prior art reference was applied to the limitation of "presenting the plurality of content repositories associated with the VCR as a single content repository to an application program interface." That is, while Golshani discloses that a plurality of schemas may be integrated into a global schema, Golshani does not actively disclose that the hierarchy and content schemas are disassociated from their hierarchy and content nodes upon creation of a global schema. Furthermore, it would have been obvious to one of ordinary skill in the art that because the schemas of the database systems are fetched, or retrieved, during the creation of the global integrated schema for a virtual database, that said schemas of the database systems would remain intact and associated with their respective databases. Accordingly, it would have been obvious to one of ordinary skill in the art that the hierarchy and content schemas remain associated with their respective hierarchy and content nodes.

Accordingly, the rejections under 35 U.S.C. 103 are maintained.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL KIM whose telephone number is (571)272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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